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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,029

04/21/2005

Zdenek Krulis

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NOTARO AND MICHALOS
100 DUTCH HILL ROAD
SUITE 110
ORANGEBURG, NY 10962-2100

EXAMINER

BOYKIN, TERRESSA M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

09/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,029	Applicant(s) KRULIS ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Petition 6-11-08 and response 2-19-08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Abstract

Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and limited to a single paragraph on a separate sheet within the range of 50 to 250 words. The printer will no longer accept Abstracts that are more than 25 lines, regardless of the number of words. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1- 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP

5030662 see abstract, claims also col. 1 lines 5-50, col. 2 line 58-69 and col. 3

lines 31-39; in view of USP 5789470 note col. 20 lines 6-12 and in claim 9.

USP 5030662 discloses recycled polymeric material containing primarily polyolefins such as high density polyethylene, ultra high molecular weight polyethylene, low density polyethylene, linear low density polyethylene, and polypropylene homopolymers and copolymers. The compositions of the invention contain, in addition to the mixed plastic matrix, reactive compatibilizers, impact modifiers, and reinforcing agents. When desired, foaming agents may also be employed. The recycled mixed plastic materials have been subject to at least one high temperature processing step when used in their original application. Such plastics differ in physical and chemical composition from virgin material.

The polymer matrix may also contain minor amounts of one or more polymeric materials such as(but not limited to) PVC (rigid or flexible), chloro-sulfonated polyethylene, compounded (reinforced) and modified polypropylene, unmodified or compounded (modified-reinforced, alloy, blends) engineering plastics such as polyamides, polycarbonates, thermoplastic polyesters (PET or PBT), ABS, polyphenylene oxide and polyacetals. The polymer matrix may contain up to 20 wt. %, preferably from 0.5 to 15 wt. % of these plastics. They can also be derived from recyclable waste.

The components (b), (c), (d) and (e) above are essential to the composition of the invention. They provide the necessary physical and chemical characteristics, mechanical strength, impact resistance, and density to the final product. Without these additives, the performance properties needed for certain specific applications could not be achieved.

With regard to component (b), the compatibilizer, this must have reactive groups which will react with the polymer matrix under heat and shear during processing by either a free radical or ionic mechanism. This serves to compatibilize the two or more polymers present in the waste material. The following materials are preferred ethylene-propylene-maleic anhydride copolymer, styrene maleic anhydride copolymer, ethylene-methyl acrylate copolymer, ethylene-ethyl acrylate copolymers, ethylene-acrylic acid copolymer, maleic anhydride ionomers (e.g., surlyn thereof, and reactive polystyrene. The amount of this component may range from about 0.5 to about 10 parts per hundred of the polymer matrix, most preferably from 0.5 to 5 parts per hundred. A combination of compatibilizers can also be used to realize the desired properties in the final product.

With regard to applicants claim 3 note that the compositions can be prepared by mixing the various components in a conventional blender, e.g., a tumble blender, a ribbon blender, or a Henschel-type mixer. Compounding can be done in machines such

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as a twin screw extruder or a continuous mixer/single screw extruder combination. Thereafter, pelletizing the extrudate strands can be done in a conventional pelletizer. The pellets thus produced can be extruded into a specific structural profile by a single screw extruder with a profile die using appropriate downstream take-off equipment.

USP 5030662 discloses a process for recycling commingled plastic prepared from the same components as claimed by applicants except for the particular amounts and additional component specifically the secondary aromatic amine as claimed. However the reference **USP 5030662** recognized and attempts to cure the same problem as discussed by applies, i.e. the ability of immiscible polymers to form usable structures. Note also col. 1 lines 5-50. The reference recognizes that additional moieties compatibilizers, modifiers and agents may be employed to accomplish this. In addition to the above, note col. 2 line 58-69 and col. 3 lines 31-39. Thus, reference would motivate one of ordinary skill in the art to use an additive that would modifier or strengthen the characteristics sought. Note **USP 5789470** discloses that recycled plastics may be stabilized by the addition of sterically hindered diamines in col. 20 lines 6-12 and in claim 9. the reference discloses that the stabilized recycled plastic comprises from 0.01 to 5% by weight based on the plastic of a mixture of compounds from 0.01 to 2% by weight of at least one sterically hindered amine. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ particular amounts of sterically hindered amine which would be inclusive of those claimed by applicants (claim 2) since the reference **USP 5789470** teaches the desirability of the addition thereof. Note further that the reference teaches that light stabilizers or UV absorbers are preferably added in an amount of from 0.01 to 2% by weight, in particular from 0.05 to 0.5% by weight, based on the plastic. The additional

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light stabilizer or UV absorber is preferably a linear sterically hindered amine, a compound of the benzotriazole type or a benzophenone. Further, although the specific diamine moieties are not claimed as in applicant's claim 2, the diamines are in fact sterically hindered amines and thus would flow naturally from the teaching of the references. Examples which are disclosed in the reference which may be used but not limited to are poly[[6-(1,1,3,3-tetramethylbutyl)amino]1,3,5-triazine-2,4-diyl][2-(2,2,6,6-tetramethyl-4-piperidyl)imino]hexamethylene[4-(2,2,6,6-tetramethyl-4-piperidyl)imino]] . When chemical compounds have "close" structural similarities and similar utilities, without more a prima facie case may be made, In re Wilder, 563 F.2d 457 (CCPA 1957); i.e., obviousness may be based solely upon structural similarity (an established structural relationship between a prior art compound and the claimed compound, as with homologs). See In re Duel, 51 F.3d 1552, 1559 (Fed. Cir. 1995). The necessary motivation to make the claimed compound, and thus the prima facie case of obviousness, arises from the reasonable expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018 (CCPA 1979).

Further, it is prima facie obvious to select a known material for incorporation into a composition, based on its recognized suitability for its intended purpose. See Sinclair & Carroll Co. v. Interchemical Corp., 325 US 327, 65 USPQ 297 (1945). (Selection of solvent having boiling point and vapor pressure properties recognized as being ideal for printing inks into printing ink compositions found obvious on its face). See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). (Selection of a known plastic to make a plastic container found obvious on its face).

With regard to the amount of diamine used as well as the percentages and molecular weights of other components, it is prima facie obvious to determine workable or optimal values within a prior art disclosure through the application of routine experimentation. See In re Aller, 105 USPQ 233, 235 (CCPA 1955); In re Boesch, 205 USPQ 215 (CCPA 1980); and In re Peterson, 315 F.3d 1325 (CA Fed 2003). Nevertheless, it is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. In re Becket, 33 U.S.P.Q. 33 (C.C.P.A. 1937). In re Russell, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa M. Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday-Thursday 10-5:30 Friday (work at home).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Terressa M. Boykin/

Primary Examiner, Art Unit 1796